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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

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Filed: Herewith

Title: Method And System of Managing Mutual
Early Termination Terms for the
Electronic Trading of Financial
Instruments

Attorney Docket No. ICOR-002 CIP

CERTIFICATE OF MAILING UNDER 37 CFR § 1.10
"Express Mail" Mailing Label Number

EL636431511US

JC906 U.S. PTO
09/692029
10/19/00

Date of Deposit: October 19, 2000

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Sir:

Transmitted herewith are the following:

Specification, including claims, abstract and twelve figures (40 pages);
Declaration and Power of Attorney;
Assignment;
Return receipt postcard.

Fees

Basic Fee			
Total Claims	20	(- 20)	
Indep. Claims	4	(4 - 3)	1
Multiple Dependent Claim(s):			

SMALL ENTITY	
Rate	Fee
	\$ 355.00
x 9.00	\$
x 40.00	\$ 40.00
	\$
TOTAL:	\$ 395.00

OTHER	
Rate	Fee
	\$.00
x 18.00	\$
x .00	\$
x 260.00	\$
TOTAL	\$

The Commissioner is hereby authorized to charge the filing fee and any fees which may be required in connection with this submission, to **Deposit Account No. 19-2385**. (Please reference attorney docket no. ICOR-002 CIP).

Date: October 19, 2000

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METHOD AND SYSTEM OF MANAGING MUTUAL EARLY TERMINATION
TERMS FOR THE ELECTRONIC TRADING OF FINANCIAL INSTRUMENTS

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application claims the benefit, under 35 U.S.C. § 120, of pending U.S. Application No. 09/665,305, entitled "Method and System of Managing Credit for the Electronic Trading of Financial Instruments," filed September 19, 2000.

FIELD OF THE INVENTION

10 This invention generally relates to computerized brokerage systems and more particularly, to the electronic trading of financial instruments between various counterparties having unilateral or bilateral credit relationships.

BACKGROUND

15 When financial instruments, such as those listed in Table 1, are traded, the credit worthiness of the opposing counterparty is important because obligations of one or both parties under such financial instruments may extend up to and beyond thirty years. Each of the parties may be exposed to risk based upon the ability of a counterparty to fulfill its obligations. The resulting credit exposure over the life of a contract is potentially an unknown amount. Therefore, trading parties have a significant interest in limiting credit exposure.

20 One method by which credit risk may be mitigated is by including early termination provisions in the terms of the trade. For example, when entering into a contract to trade a 10- year swap, both parties may agree to give the counterparty an option after 5 years to 25 terminate (i.e. "unwind") the contract at "fair value," calculated at the time the option is exercised. This gives each party the opportunity to evaluate the counterparty's credit worthiness at the future date. These terms are typically called "mutual puts," "early termination clauses" or "break clauses". The mutual put terms typically include two time parameters specifying when the parties may exercise the option: the initial time at which 30 either party may exercise the option (the "first look" or "start date"), and the times, if any, at which such options may be exercised thereafter (the "period"). For example, a five year

period may be exercised every five years after the first look dates for the life of the instrument, and a one year period may be exercised every year after the first look date for the life of the instrument. The parties may also specify other parameters, such as the last time the parties may exercise the option (the "last look"). The parties also agree, at the time

5 the contract is entered into, as to the methods for settlement and calculating fair value, such as those methods set forth in the International Swaps and Derivatives Association ("ISDA"), 2000 ISDA Definitions.

A number of systems have been developed which attempt to automate the trading process and provide credit controls. For example, U.S. Patent No. 6,014,627 describes an 10 anonymous trading system which identifies the best bids and offers from those counterparties with which each party is eligible to trade. The system pre-screens each bid and offer for a particular type of financial instrument for compatibility with credit information to calculate a best price (the "dealable" price), for each entity dealing with the particular financial instrument.

15 U.S. Patent No. 5,924,083 describes a distributed trading system for displaying a credit-filtered view of markets for financial instruments based upon credit limits entered by the trading parties. Each trading entity initially enters credit information which consists of the amount of credit that the trading entity is willing to extend to other trading entities for one or more types of trading instruments. Each trading entity may also create group credit limits by 20 which the trading entity may limit the amount of credit it is willing to extend to a group of potential counterparties.

F/X Products
<i>American and European Options</i>
Calls
Puts
Risk Reversals and Straddles
Strangles
<i>Exotic Options</i>
Knock-ins/outs
Reverse knock ins/outs
<i>Other Instruments</i>
Forwards
Fixed Income Products
<i>Swaps</i>
Swap spreads (traded with treasury hedge)
All-in rate swaps
Spread switches
All-in-rate switches
1-3,3-6,1-6 month LIBOR basis swaps
CP-3 month LIBOR basis swaps
<i>Forward Rate Agreements</i>
1/3/6 month LIBOR
FRA Switches
<i>Swaptions</i>
European (payer, receiver, straddle)
Bermudan (payer, receiver, straddle)
Bermudan-European Switches (payer, receiver, straddle)
<i>Caps/Floors</i>
LIBOR Cap/Floor, Straddle
LIBOR Digital Cap/Floor
<i>Convexity Products</i>
Cap/Floor, Straddle (CMS/CMT 2, 5, 10, 30 year tenors)
Rolling Spread Locks against a spot hedge
Rolling Spread Locks quoted outright
Equity Index Products
<i>American and European Options</i>
Calls
Puts
Straddles

TABLE 1

PCT Application, No. PCT/US98/21518 describes a credit preference method in an anonymous trading system for screening trades between entities. Three screening methods are described: a binary method in which each entity makes a yes or no determination as to whether or not it will deal with each potential counterparty; a line binary or time limit method

5 in which each entity sets a maximum maturity of contracts for each potential counterparty; and a "complex" method in which each entity specifies a maximum amount it will trade with each counterparty for one or more "maturity bands." The system provides a "complex preference interface" through which a credit administrator for the trading entity can specify for each potential counterparty, the maximum exposure for each maturity band. For
10 example, an entity could specify that for a given counterparty, it "will do up to \$100 million out for 5 years, and then only \$50 million out from thereafter out to 10 years, and nothing thereafter." In determining appropriate limits, the administrator use a measure of "risk equivalence" (RQ) which is calculated as a function of the potential exposure averaged over a series of time points, weighed by a discount factor.

15 In a typical "conversational" trading desk scenario in which traders enter and act on orders over the telephone, the traders may verbally negotiate for whether mutual puts will be required, and if so, the terms for such mutual puts (e.g. first look and period). At least one known automated trading system allows traders to enter into "free form" electronic messaging in which the traders may negotiate for mutual puts and relevant terms (e.g. first
20 look and period). The traders are then required to report the mutual put parameters to trading system administrators who generate the appropriate confirmation forms. However, no known electronic or conversational system allows a credit administrator or other authorized user to set enforceable limits for mutual put requirements. Thus, there exists a need for a method and system of facilitating the enforcement of mutual put requirements for
25 use with electronic trading systems.

SUMMARY OF THE INVENTION

These and other limitation of the prior art are addressed in the present invention which is a system and method of tracking credit limits between counterparties trading
30 financial instruments on a trading system, where each financial instrument may have one or

more tenors associated with it. Each trading party has a set of credit limits associated with each other potential trading party. This includes a credit limit for one or more tenors of each financial instrument to be traded. The tenors are grouped into sets of "buckets," where a single credit limit is applied to all tenors in an individual bucket. A relationship is associated

5 with the credit limits for a first group of buckets wherein credit extended on one of the tenors in an individual bucket proportionally reduces the available credit for the other buckets, and therefore the credit limit on each tenor in the buckets. When a trade is entered into between a party and a given counterparty for a given tenor, the credit limit for the bucket associated with the tenor is reduced by the amount of the trade and the credit limits on the related

10 buckets are proportionally reduced. In a preferred embodiment, the credit limit of each bucket is reduced in proportion to an initial assigned credit limit.

In an embodiment of the invention, the credit limits associated with each other potential trading party further include mutual put requirements for contracts entered into between the parties.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a schematic diagram of exemplary credit relationships formed between trading organizations in accordance with the present invention;

Figure 2 is a flow chart of a preferred process for tracking credit limits in accordance with the invention;

Figure 3 is a flow chart of a method for calculating proportional draw downs and currently available limits in accordance with the present invention;

Figure 4 shows an exemplary user interface for selecting trading groups in accordance with the present invention;

25 Figures 5A and 5B show an exemplary user interface for specifying draw down proportions for various tenors for financial instruments in accordance with the present invention;

Figure 6A shows an exemplary user interface for setting eligibility as well as available credit multipliers for a plurality of counterparties in accordance with the present invention;

Figure 6B shows an exemplary user interface for setting mutual put requirements for a plurality of counterparties;

Figure 7 shows an exemplary user interface for customizing proportional draw downs for individual institutions;

5 Figure 8 shows an exemplary user interface for globally selecting buckets of financial instruments;

Figure 9 shows an exemplary user interface for setting buckets for an individual institution;

10 Figure 10 shows an exemplary trader screen including credit relationship status information for each bid and offer;

Figure 11 is a schematic of an exemplary computer network implementing the disclosed invention; and

15 Figure 12 is a flow chart of a method of enforcing mutual put parameters in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

With reference to Figure 1, a typical trading and credit scenario is described. Trades of financial instruments are typically performed between trading groups (10, 12, 14, 16, 18, 20). Each trading group typically trades one or more types of financial instruments. Each trading group also typically includes one or more individual traders. Credit relationships are typically established between trading groups and legal organizations (22, 24, 26 and 28).

20 Alternatively, credit relationships may be formed between trading groups and parent companies of the legal organizations (shown as institutions 30, 32); or between any combination of trading groups, organizations, institutions, or other entity. Accordingly, the term "party" or "counterparty" shall refer to any institution, organization, trading group, or other entity which has a unilateral or bilateral credit relationship with another entity. In a typical scenario, a credit officer or someone with policy setting power for a party will define the amount of credit the party is willing to extend to each potential counterparty.

25 The invention is most suited to instruments that include on-going obligations, such as those listed in Table 1, but can also be applied to other instruments, such as stocks and

bonds where a party's only significant risk is settlement. Moreover, the invention also applies to contracts based upon the exchange of any commodity, such as contracts for the exchange of bandwidth, real estate, electricity, processing power, freight transportation, etc. Thus the term "financial instruments" as used herein includes contracts based upon such

5 commodities or services.

With reference to Figure 2, an overview of the system for entering and processing credit limits on buckets is described. For each potential counterparty (50), the system is initialized, i.e. α is set to zero (51), and the credit officer or other authorized user (referred to herein as an "administrator" or "credit officer") defines a Proportional Draw Down limit (52) for each bucket by tenor M_i^0 for buckets ($i = 1 \dots N$). The administrator may combine several tenors or financial instruments into a single bucket. Thus, for example, the administrator may choose to set up three buckets for a given financial instrument, such as a two year tenor, a five year tenor and a seven year tenor. Any tenor for this financial instrument would then be assigned to one of these buckets based on its lifespan. In a preferred embodiment, any tenor of the financial instrument of two years or less would be assigned to the two year bucket; any tenor of the financial instrument of greater than two years but less than or equal to five years would be assigned to the five year bucket; and any tenor of the financial instrument of greater than five years but less than or equal to seven years would be assigned to the seven year bucket. Any tenor of the financial instrument of greater than seven years could not be traded unless the administrator chose to create an additional bucket of a longer tenor. In an alternate embodiment, tenors of greater than the maximum bucket tenor are given a "maybe" trading status, as described further below. The administrator further decides how buckets are related. For example, all tenors of a given financial instrument are typically related. In addition, the administrator may also decide to group different financial instruments, such as swaps and options, together, such that credit drawn down for swaps will reduce the credit available for the options.

The Proportional Draw Down for each bucket represents the amount of trading that could potentially be done (on a notional basis) in a single bucket that would completely exhaust the entire credit limit of a given counterparty. Combined, the Proportional Draw Downs for a group of buckets give the proportional relationship between trades done in

different buckets. In one embodiment of the invention, the administrator may further define an Overriding Credit Limit (54) for each bucket O_i^0 for buckets ($i = 1\dots N$) which is an additional constraint on credit that further limits the trading in any bucket. The Overriding Credit Limit is the maximum that may be drawn down from a given bucket. The Current

5 Available credit limit at any given time for each bucket is then the minimum of the Proportional Draw Down and the Overriding Credit Limit. In one embodiment, the administrator may further specify a minimum trade amount (CL_{min}) below which trades will be allowed. This may be a global variable or assigned individually for each entity. Optionally, this minimum is simply set to zero.

10 The Proportional Draw Downs create a relationship between the various buckets for the various instruments, such that the trading in any instrument in any single bucket will have an effect on all of the instruments in any related buckets. While the present invention is described in terms of Proportional Draw Downs, other methods of specifying the relationship between tenors of financial instruments are within the scope of the invention and will be apparent to those of skill in the art based on the specification herein. These alternate methods include, without limitation, specifying the fractional relationships between buckets. Thus, for example, one could specify a credit relationship between ten year, five year, and two year tenors, for a given option, as 1:4; 1:2; and 1:1. Once the administrator defines the Proportional Draw Downs, and, optionally, the Overriding Credit Limits, the system calculates (55) initial Currently Available Limits for each bucket C_i^0 for buckets ($i = 1\dots N$). The initial Currently Available Limits are preferably calculated according to the formula:

$$C_i^0 = \max (\min [M_i^0, O_i^0], CL_{min}).$$

15 As shown in Figure 2, after the Proportional Draw Down Limits and Overriding Limits are defined, and the initial Currently Available Limits are calculated, the system is ready to process trades (56). A preferred methodology utilizing the concept of Proportional Draw

20 Downs along with Overriding Limits to track Current Available Limits is now described:

25 Suppose there are N Buckets: $1\dots N$.

Suppose that there have been α ($\alpha = 0, 1, 2, \dots$) trades done so far.

Denote the values of the Proportional Draw Downs for the N buckets after α trades as M_i^α , $i = 1 \dots N$, the values of the Overriding Limits as O_i^α , $i = 1 \dots N$, and the values of the Current Available Limits as C_i^α , $i = 1 \dots N$.

Suppose that the $\alpha + 1$ trade is done (56) in the k^{th} bucket with size X_k .

5 In one embodiment of the invention, both parties to a trade will draw down the credit limits available to the opposing party for any trade. In another embodiment, trades for certain types of instruments having non-symmetrical credit risks will only draw down against the credit limits for one of the parties. For example, the buyer of an option would want to reduce the credit limit of the party it is buying the option from, whereas the seller of an option
 10 may not want to reduce the credit limit of the party it is selling the option to. In this embodiment, the system will determine whether to reduce one or both parties respective credit limits based on the nature of the instrument and whether the party is a buyer or a seller.

The system calculates (58) (for at least one counterparty) new values for the
 15 Proportional Draw Downs as:

$$M_i^\alpha + 1 = M_i^\alpha - (M_i^\alpha / M_k^\alpha) * X_k. \quad (1)$$

The system calculates (60) (for at least one counterparty) new values for the
 20 Overriding Limits as:

$$O_i^\alpha + 1 = O_i^\alpha - \delta_{ik} * X_k. \quad (2)$$

where δ_{ik} is the well known Kronecker Delta and has a value equal to 0 if i is not equal to k and a value equal to 1 if i equals k .

The system calculates (62) (for at least one counterparty) new values for the Current Available Limits as:

$$C_i^\alpha + 1 = \max (\min [M_i^\alpha + 1, O_i^\alpha + 1], CL_{\min}). \quad (3)$$

25 where \max is the maximum function which compares the two arguments and returns their maximum, and \min is the minimum function which compares its two arguments and returns their minimum.

As noted above, in one embodiment CL_{\min} is automatically set by the system to zero. This ensures that the counterparty's credit limit will never be less than zero. However, CL_{\min}
 30 may be changed by an authorized user. Finally, α is incremented (63)

For the case of a typical trading desk authorized to trade swaps and options the following examples will help to understand the invention. Assume the trading desk's credit officer has specified the values for Proportional Draw Downs and Overriding Limits as shown in the first two rows of Table 2 and Table 3 below.

5 Initially no trades have taken place (i.e. $\alpha = 0$).

SWAPS	2 Year ("bucket 1")	5 Year ("bucket 2")	10 Year ("bucket 3")
Proportional Draw Down (\$MM)	400	200	100
Overriding Limit (\$MM)	300	100	80
Current Available Limit (\$MM)	300	100	80

Table 2

OPTIONS	2 Year ("bucket 4")	5 Year ("bucket 5")	10 Year ("bucket 6")
Proportional Draw Down (\$MM)	800	400	200
Overriding Limit (\$MM)	500	400	200
Current Available Limit (\$MM)	500	400	200

Table 3

If we let the two year bucket for Swaps be bucket 1; the five year bucket for Swaps be bucket 2; the 10 year bucket for Swaps be bucket 3; the two year bucket for Options be bucket 4; the five year bucket for Options be bucket 5; and the ten year bucket for Options be bucket 6; the values for Proportional Draw Downs, Overriding Limits, and Current Available Limits are as follows:

$$M_1^0 = 400, M_2^0 = 200, M_3^0 = 100, M_4^0 = 800, M_5^0 = 400, M_6^0 = 200;$$

$$O_1^0 = 300, O_2^0 = 100, O_3^0 = 80, O_4^0 = 500, O_5^0 = 400, O_6^0 = 200;$$

$$C_1^0 = 300, C_2^0 = 100, C_3^0 = 80, C_4^0 = 500, C_5^0 = 400, C_6^0 = 200.$$

Now assume a trade takes place consisting of \$40 MM of 2 year Swaps. The value for the trade size is:

$$X_1 = 40.$$

The new values (i.e. the $\alpha + 1$ values) for the Proportional Draw Downs, Overriding Limits, and Current Available Limits can then be calculated using equations (1), (2), and (3) respectively.

For example:

5 $M_1^1 = 400 - (400/400) * 40 = 360;$
 $O_1^1 = 300 - 1 * 40 = 260;$
 $C_1^1 = \max(\min(360, 260), 0) = 260.$

Tables 2 and 3 can then be updated with the new values as shown in Tables 4 and 5, respectively.

10

SWAPS	2 Year	5 Year	10 Year
Proportional Draw Down (\$MM)	360	180	90
Overriding Limit (\$MM)	260	100	80
Current Available Limit (\$MM)	260	100	80

Table 4

15
20

OPTIONS	2 Year	5 Year	10 Year
Proportional Draw Down (\$MM)	720	360	180
Overriding Limit (\$MM)	500	400	200
Current Available Limit (\$MM)	500	360	180

Table 5

In a more general embodiment of the invention, Overriding Limits are not required. In essence, this is a special case of the above methodology in that it is equivalent to setting the Overriding Limit to the Proportional Draw Down for each bucket. The mathematical model for this case is as follows:

Suppose there are N Buckets: 1...N.

Suppose that there have been α ($\alpha = 0, 1, 2, \dots$) trades done so far.

Denote the values of the Proportional Draw Downs for the N buckets as M_i , $i = 1 \dots N$.

Denote the values of the Current Available Limits after α trades as C_i^α , $i = 1 \dots N$.

5 Suppose that the $\alpha + 1$ trade is done in the k^{th} bucket with size X_k .

The new values for the Current Available Limits are

$$C_i^\alpha + 1 = \max [C_i^\alpha - (M_i / M_k) * X_k, CL_{\min}]. \quad (4)$$

Equation (4) can be employed in a similar manner to equation (3) above to continually track available credit. As above, in one embodiment CL_{\min} is automatically set to zero, but 10 may, alternatively, be administrated as noted above.

In one embodiment of the invention, the system implements the above procedure by normalizing the credit limits in buckets 1...N to the credit limit for a single bucket, called a Normalized Total Credit (NTC). The buckets are typically normalized to the maximum tenor, for example, the swaps of Table 2 above would be normalized to \$100 million ten year swaps.

15 Thus, for example the conversion ratios (CR_i) for the two, five, and ten year swaps of Table 2 could be expressed as: .25, .5, and 1, respectively, where NTC is the normalized total credit (\$100 million) with respect to the ten year swap.

With reference to Figure 3, a preferred method for calculating credit limits using NTC 20 is now discussed. Once the Proportional Draw Downs and Overriding Credit Limits have been entered, the NTC must be set (70). As noted above, this is typically set equal to the Proportional Draw Down of the maximum tenor for at least one instrument, but may be set equal to any draw down limit or any arbitrary value. The conversion ratios (CR_i) are then calculated (72) for each bucket as the ratio of the NTC over credit limit for that bucket.

25 When a signal indicating the $\alpha + 1$ trade has occurred for a tenor falling in the k^{th} bucket for amount X_k , is being entered into is received (74), the system recalculates (76) the NTC as:

$$NTC^{\alpha+1} = NTC^\alpha - (X_k * CR_i).$$

30 Proportional Draw Downs for each bucket (M_i) are calculated (78) as:

$$M_i^{\alpha+1} = NTC^{\alpha+1} * 1 / CR_i.$$

Overriding Credit Limits (O_i) are calculated (80) as:

$$O_i^{\alpha+1} = O_i^{\alpha-1} - \delta_{ik} * X_k.$$

5

Current Available Limits (C_i) are calculated (82) as:

$$C_i^{\alpha+1} = \max (\min [M_i^{\alpha+1}, O_i^{\alpha+1}], CL_{\min}).$$

10 Continuing the example from Table 2 and 3 above, Tables 6 and 7 show initial Proportional Draw Downs of 400, 200, and 100 million, and Overriding Credit Limits of 300, 100, and 80 million for 2, 5 and 10 year swaps; and Proportional Draw Downs of 800, 400, and 200 million and Overriding Credit Limits of 500, 400, and 200 for 2, 5, and 10 year options, respectively.

SWAPS	2 Year	5 Year	10 Year
Proportional Draw Down (\$MM) Conversion Ratio	400 CR: .25	200 CR: .5	100 CR: 1
Overriding Limit (\$MM)	300	100	80
Current Available Limit (\$MM)	300	100	80

Table 6

OPTIONS	2 Year	5 Year	10 Year
Proportional Draw Down (\$MM) Conversion Ratio	800 CR: .125	400 CR: .25	200 CR: .5
Overriding Credit Limit (\$MM)	500	400	200
Current Available Limit (\$MM)	500	400	200

Table 7

Assume forty million dollars of two year swaps, sixty-five million dollars of ten year swaps, as well as eighty million dollars of two year options are traded. NTC is calculated as follows:

$$NTC = 100 - (40 \times .25) - (65 \times 1) - (80 \times .125) = 15.$$

The new available limits, as shown in Tables 8 and 9 are calculated being 30 for the five year swaps or 2 times the ten year NTC, 60 for the two year swap or 4 times the ten year

5 NTC, and the new values for the options are 2 times the ten year NTC or 30 for the ten year options, the five year options maximum is 60 or 4 times the ten year NTC, and the new two year options limit is 8 times the ten year NTC or 120. Had any of the overriding credit limits been less than the calculated available limits, those values would have been used. Also, tables 8 and 9 have been updated to reflect updated Overriding Credit Limits.

SWAPS	2 Year	5 Year	10 Year
Proportional Draw Down (\$MM)	60	30	15
Overriding Credit Limit (\$MM)	260	100	15
Current Available Limit (\$MM)	60	30	15

Table 8

OPTIONS	2 Year	5 Year	10 Year
Proportional Draw Down (\$MM)	120	60	30
Overriding Credit Limit (\$MM)	420	400	200
Current Available Limit (\$MM)	120	60	30

Table 9

With reference to Figures 4 - 9, a preferred interface for managing credit limits will now be described. The credit officer, administrator, or other authorized user selects from a list of trading groups (shown as 112, 114, 116, 118, 120, 122, 124 and 126). The credit

25 officer will select one or more of these trading groups and set trading properties for the selected group or groups. The credit officer enters the properties screen by selecting the properties link (128). Overriding Credit Limits may be specified using a similar interface (not shown) for embodiments including overriding credit limits.

Figure 5A shows a draw down proportion screen (tab 150), including a draw down matrix (128), having three instruments, swaps (130), swaptions (132) and cap/floors (134). Additional instruments traded by the specific trading group, in this example, the USD Swaps and Options group, may be available by scrolling down the screen (not shown). In this

5 example, four buckets for each instrument are displayed, two year (140), five year (142), seven year (144) and ten year (146). As noted above, each tenor for any listed instrument will be assigned by the system to one of the buckets for that instrument. The credit officer will enter the Proportional Draw Downs for each bucket for each instrument. For example, in Figure 5A, the officer has entered 1600 for two year swaps, 1000 for five year swaps, etc.

10 As shown in Figures 8 and 9, the credit officer can redefine the number, and tenor, of buckets, either globally (Figure 8) or on an individual trading group (Figure 9) basis.

As shown by the horizontal and vertical "=" symbols in the draw down matrix (128), the Proportional Draw Downs for each tenor (140, 142, 144 and 146) of the instruments (130, 132 and 134) will be related. Thus, 500 in ten year swaps will be equivalent in draw down of credit to 1500 in two year cap/floors. As shown in Figure 5B, in one embodiment, the credit administrator may specify that certain instruments and/or tenors are not related, by turning off the horizontal and/or vertical "=" symbols. For example, in Figure 5B, the credit administrator has created two sets of buckets, one for USD swaps and USD swaptions, and a second for USD Cap/Floor. Thus, trading in the USD Cap/Floor instruments will not effect credit levels in the USD swaps and USD swaptions set of buckets. Likewise, trading in USD swaps or USD swaptions will not effect the credit levels in the USD Cap/Floor buckets.

Any instrument with a tenor not falling within a specific bucket will preferably be automatically grouped to the next higher bucket. Thus, for the example shown in Figure 5A, trading a six year swap will be the same as trading a seven year swap for credit purposes.

25 In another embodiment, any instrument with a tenor not falling within a bucket will be allocated among the next higher and next lower buckets by mathematical interpolation. For the example shown in Figure 5A, a trade in a six year swap in this embodiment may have one half of its notational size drawn down from the five year bucket and one half drawn down to the seven year bucket.

Figure 6A shows an eligibility screen (tab 152), including an eligibility matrix (160), having a list of eligible entities (162), a binary eligibility list (164) and a draw down multiple (166). A trading group profile specifies which entities will be included in the eligible institution list (162). The first time the credit officer accesses the eligibility screen (tab 152), eligibility is

5 defaulted to yes for all entities in the eligible institution list and the multiplier (166) is defaulted to 1.0. Any entities not included in the list will be assumed to be eligible, although their multiplier will be set to zero. Thus, as described below, new institutions will be given "maybe" status until the administrator further specifies credit status for that institution. The credit officer may modify eligibility for any specific institution by clicking on the binary

10 eligibility list (164). The draw down multiple list allows the credit officer to easily multiply the drawn down matrix (128) set above in Figure 5A by a multiplication factor. For example, Morgan Guarantee Trust has been assigned a multiple of 2.0 in Figure 6A. The system would then multiply each entry in the draw down matrix (128) of Figure 5A by a factor of 2.0. For example, the two, five, seven and ten year limits for USD Swaps for Morgan Guarantee

15 Trust would be set to 3200, 2000, 1600 and 1000 for two, five, seven and ten year buckets, respectively.

Figure 7 shows a customization screen (tab 154), including a customizable draw down matrix (170) and an available credit limit matrix (172) for each trading institution. The credit officer may individually set the draw down limits for each bucket and instrument for each trading institution. The screen allows the credit officer to scroll down to additional trading entities. Users without credit setting power may view this screen to see the available credit limits for each institution, but preferably, are not allowed to modify credit limits.

As shown in Figure 10, credit relationships in accordance with the present invention may be displayed on trader screens such that the credit relationship for individual trades may

25 be displayed while keeping the identity of the potential trading counterparty anonymous. In a preferred embodiment, individual bids and offers are displayed with an indication, preferably specific colors, corresponding to the potential credit relationship of the counterparty. Bids and offers on which credit is bilaterally approved according to the credit relationship scheme are indicated by a first color, preferably green (shown as standard font text in Figure 10).

30 Bids and offers having a "maybe" status as to credit are indicated by a second color,

preferably yellow (shown as underlined text in Figure 10). A bid or offer will have a "maybe" status when credit was initially assigned by either party to the potential counterparty but has been used up, at least for the specific tenor, through one or more trades. These are considered "maybe" in the preferred embodiment because credit officers typically spread

5 credit over a variety of systems and are often willing to further extend credit on one or more systems to a specific counterparty, particularly when the credit for the given counterparty has been used up on one system but not another. Alternately, "maybe" status for a potential counterparty would arise where the initial proportional draw downs or overriding credit limits have been set to zero. Bids and offers in which one or both parties have a "no" status are

10 indicated with a third color, preferably red (shown as bold/italic in Figure 10). This occurs when the credit officer for either party indicates they will not trade with the entity associated with the bid and/or offer. Traders using this system will immediately know the credit status, "yes," "no," or "maybe," of any bid or offer on the system before attempting to enter into a trade.

Figure 6B shows an eligibility screen (tab 152) in an embodiment of the invention utilizing mutual put requirements (400) including a start, or first look, list (402) and a maximum period list (404) (referred to as a "period" herein). For example, line 406 indicates that in order to trade a given financial instrument with Merrill Lynch Capital Services, an early termination agreement must be entered into having a first exercise time no longer than 10 years after the trade is entered into and additional exercise times on at least every 5 year anniversary of the first exercise date for the duration of the financial instrument. For financial instruments having tenors less than the start time (402), no mutual put would be required.

Other potential mutual put parameters are possible, such as a termination date or a "minimum period" (both discussed below). This screen (tab 152) also preferably includes a list of eligible entities (162), a binary eligibility list (164) and a draw down multiple (162). The mutual put requirement list (400) allows the credit officer, or other authorized user, to set mutual put time requirements for each potential counterparty. As shown, mutual put requirements may include a start, or first look, time (402) and a period thereafter (404). A "single look" option may be specified by entering a start date (402) and leaving the period field (404) blank. With a "single look," the mutual put can only be exercised once, at the time

specified in the start field (402). The credit officer may indicate that no mutual put option is required such as by entering a start time (402) which is longer than the longest tenor instrument traded with a potential counterparty or by leaving the start field (402) blank. Also, the period field (404) does not become active (i.e. can not be changed) unless the start time 5 (402) is specified. Alternate methods for indicating that no mutual put is required could be used. The mutual put requirements are stored by the system in a database.

As shown in Figure 12, mutual put requirements are preferably automatically enforced between counterparties. The system receives a signal (1202) indicating two parties (Party A and Party B) wish to enter into a trade. The system retrieves (1204) the bilateral mutual put 10 requirements that were previously stored and calculates a set of mutual put parameters for the trade. In one embodiment, each mutual put requirement will have a first look variable and a period variable. The system preferably calculates (1206) the minimum start date as the minimum of (the start date specified by a credit officer for Party A for trades with Party B, and the start date specified by a second credit officer for Party B for trades with Party A). 15 Likewise, the minimum period will be calculated (1208) as the minimum of (the period specified by the credit officer for Party A for trades with Party B, and the period specified by the credit officer for Party B for trades with Party A). As mentioned above, a single look may also be specified by one or both counterparties. The period on a single look can be thought of as infinite. Therefore, if the credit officer for Party A specified a single look for trades with 20 Party B, and the credit officer for Party B specifies both a first look and a period for trades with Party A, the period specified by Party B will be the minimum and, thus, used.

Alternatively, mutual put parameters may be calculated by other methods to meet the needs of the parties utilizing the system. For example, if certain parties do not have the backoffice facilities to handle frequent "looks," i.e. small periods, they will be interested in 25 demanding a certain minimum period below which they will not want to trade. Thus, in one embodiment, credit officers may specify a "minimum period" for mutual puts. This may be entered on an individual counterparty basis, such as through a minimum period list (not shown), or on a global basis for all potential counterparties. The system will calculate the mutual put parameters for this "minimum period" as the maximum of (the minimum period 30 specified by a credit officer for Party A for trades with Party B, and the minimum period

specified by a credit officer for Party B for trades with Party A.) In one embodiment, credit officers may specify both a minimum period and a maximum period (as noted above referred to as the "period" herein) for various counterparties. The system will verify that the minimum of the bilateral maximum periods is not too frequent for either counterparty, i.e. is not less

5 than the minimum period for either counterparty.

It will be obvious to those skilled in the art that while Figure 12 shows the step of receiving a trade signal (1202) before the steps of calculating the mutual put parameters (1206, 1208), mutual put parameters between each pair of potential counterparties could be pre-calculated (1206, 1208) and stored in a 2 dimensional table. The system then looks up

10 the pre-calculated mutual put requirements in response to receiving a trade signal (1202).

The system preferably provides a confirmation screen to both parties asking them to confirm the trade and the calculated mutual put parameters, e.g. start date and period. Preferably, the identity of the counterparty is disclosed in this notice. If the system receives (1212) confirmation from both parties, the trade is added (1214) to the historical database for both parties. Because the mutual put information is kept in defined fields in the system, this information can be easily reported to the party's credit officer or other interested authorized user.

In one embodiment of the invention, traders for Party A and Party B may further negotiate the mutual put parameters. In this embodiment, traders may enter appropriate mutual put data into specified fields on the confirmation screens (1213). The system verifies (1216) that the mutual put data entered by the traders satisfy the minimum mutual put requirements specified by their respective credit officers. As noted above, a credit officer may specify that no mutual put option is required. In this case, a trader associated with that credit officer is free to suggest any set of mutual put data to the counterparty for the trade.

25 The system will then calculate the mutual put parameters by finding the minimum(s) of the mutual put data entered by the parties.

As noted above, other methods of calculating (1218) the mutual put parameters may be used.

The system is preferably implemented utilizing a computer network as disclosed in

30 Figure 11. Each trader station (250, 251 and 252) is connected to the server (254) through

the network (255). The network (255) is preferably a private network connected through any number of means, such as T1 lines, digital subscriber lines, cable modems, satellite links, or other available connection means. One or more trader stations for a trade group may be coupled via a local area network (253). A credit officer station (256) also is preferably

5 coupled via the same local area network (253) to server (254). Alternatively, trader stations (250, 251 and 252) may be coupled to server (254) through any of a number of means, such as via a public network such as the Internet or via a virtual private network. The system preferably utilizes a client-server architecture in which trader stations (250, 251 and 252) execute a thin-client written in Java to communicate with the server (254). In an alternate
10 embodiment, the server (254) acts as a web server and communicates with trader stations (250, 251 and 252) using a page description language, such as HTML. In this embodiment, traders interact with server (254) using an HTML compatible browser (e.g., Netscape Navigator® or Microsoft Internet Explorer®).

15 Although the present invention was discussed in terms of certain preferred embodiments, the description is not limited to such embodiments. Rather, the invention includes other embodiments including those apparent to a person of ordinary skill in the art. Thus, the scope of the invention should not be limited by the preceding description but should be ascertained by reference to claims that follow.

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What is claimed is:

1. A method, with the aid of a computer system, of tracking mutual put credit requirements for the trading of financial instruments between at least a first party and a second party, comprising:

storing a second set of mutual put requirements associated with said second party for trades with said first party;

receiving a trade indication identifying said first party and said second party;

and

calculating a set of mutual put parameters based on said first set of mutual put requirements and said second set of mutual put requirements.

2. The method of claim 1 further comprising:

facilitating the display of said set of mutual put parameters to said first party and said second party.

3. The method of claim 1 further comprising:

providing a confirmation screen to each of said first party and said second party, said confirmation screen including said calculated set of mutual put parameters.

4. The method of claim 3 further comprising:

receiving a confirmation indication from each of said first party and said second party.

25 said trade indication.

6. The method of claim 5 further comprising:

in response to receiving said renegotiate mutual put parameter confirmation indication,

receiving mutual put data, and

verifying that said mutual put data satisfy said first set of mutual put requirements and said second set of mutual put requirements.

7. The method of claim 1 wherein said first party and said second party trade a plurality of financial instruments, said method further comprising:

5 for each said financial instrument traded between said first party and said second party,

storing a first set of mutual put requirements established by said first party for trades with said second party, and

10 storing a second set of mutual put requirements established by said second party for trades with said first party,

whereby each said financial instrument traded between said first party and said second party may have different bilateral mutual put requirements.

8. The method of claim 1 wherein said mutual put comprises:

an option by at least one said party to unwind said financial instrument in the future.

9. The method of claim 8 wherein said mutual put requirements comprise:

a first look for exercising said option to unwind said financial instrument.

10. The method of claim 9 wherein said mutual put requirements further comprise:

a minimum period after said first look for exercising said option to unwind said financial instrument.

11. The method of claim 9 wherein said mutual put requirements further comprise:

a maximum period after said first look for exercising said option to unwind said financial instrument.

12. The method of claim 11 wherein said calculation of said set of mutual put

25 parameters comprises:

calculating the minimum of (said first look of said first set of mutual put parameters and said first look of said second set of mutual put parameter); and

30 calculating the minimum of (said maximum period of said first set of mutual put requirements and said maximum period of said second set of mutual put requirements).

13. The method of claim 11 wherein said mutual put requirements further comprise:

a last time for exercising said option to unwind said financial instrument.

14. The method of claim 10 wherein said calculation of said set of mutual put

5 parameters comprises:

calculating the minimum of (said first look of said first set of mutual put parameters and said first look of said second set of mutual put parameter); and

calculating the maximum of (said minimum period of said first set of mutual put requirements and said minimum period of said second set of mutual put requirements).

10 15 16. The method of claim 1 further comprising:

generating a report of mutual put parameters for trades entered into by said first party.

16 20 25 17. A method, with the aid of a computer system, of enforcing mutual put credit requirements for the trading of financial instruments between at least a first party and a second party, comprising:

storing a first set of mutual put requirements associated with said first party for trades with said second party;

storing a second set of mutual put requirements associated with said second party for trades with said first party;

receiving a trade indication identifying said first party and said second party, said trade indication further including a negotiated set of mutual put parameters; and

verifying that said negotiated set of mutual put parameters satisfy said first set of mutual put requirements and said second set of mutual put requirements.

25 18. A system for enforcing mutual put requirements among at least a first party and a second party trading at least one financial instruments, comprising:

a database, said database storing:

a first set of mutual put requirements established by said first party for trades with said second party; and

a second set of mutual put requirements established by said second party for trades with said first party;

an interface adapted to receive a trade indication from a trading system, said trade indication identifying said first party and said second party; and

5 a server coupled to said interface and said database, said server adapted to receive said trade indication from said interface, said server further adapted to calculate a set of mutual put parameters, said calculation based on said first set and said second set of mutual put requirements.

18. The system of claim 17 further comprising:

10 a display terminal associated with at least one of said first party and said second party;

said server further adapted to display a confirmation screen on said display terminal.

19. The system of claim 17 wherein said first set of mutual put requirements and said second set of mutual put requirements are stored in said database as a two dimensional table of calculated mutual put parameters.

20. A method, with the aid of a computer system, of enforcing credit requirements for the trading of at least one financial instrument between at least a first party and a second party, said at least one financial instrument having a plurality of tenors, said method comprising:

25 storing a first set of credit requirements designated by said first party for trades of said financial instrument with said second party, said first set of credit requirements identifying a first plurality of buckets, each bucket associated with a plurality of said tenors of said financial instrument, each bucket having an available credit limit and an assigned relationship, wherein credit extended by said first party for trades with said second party on said financial instrument with one of said plurality of tenors associated with one said bucket reduces said available credit limit in said associated bucket and further reduces each said available credit limit for each bucket of said plurality of buckets in proportion to said assigned relationship,

said first set of credit requirements further including a first set of mutual put requirements;

storing a second set of credit requirements designated by said second party for trades of said financial instrument with said first party, said second set of credit

5 requirements identifying a second plurality of buckets, each bucket associated with a plurality of said tenors of said financial instrument, each bucket having an available credit limit and as assigned relationship, wherein credit extended by said second party for trades with said first party on said financial instrument with one of said plurality of tenors associated with one said bucket reduces said available credit limit in said associated bucket and further reduces each said available credit limit for said plurality of buckets in proportion to said assigned relationship,

said second set of credit requirements further including a second set of mutual put requirements;

receiving a trade indication associated with a trade action, said trade indication including a first party, a second party, a trade tenor and a trade amount;

calculating a set of mutual put parameters based on said first set of mutual put requirements and said second set of mutual put requirements; and

calculating said available credit limits for said first plurality of buckets and said second plurality of buckets as a function of said trade tenor and said trade amount.

ABSTRACT

A method and system for tracking and enforcing mutual put, i.e. early termination, requirements for contracts between a first financial institution and a second financial institution for underlying financial instruments is disclosed. The mutual puts comprise an option to unwind the underlying financial instrument at a future time. One embodiment of the system includes storing a plurality of sets of mutual put requirements for a plurality of trading parties, each set of mutual put requirements established by a first party for trades with a counterparty; receiving a trade indication identifying a pair of trading parties; retrieving the mutual put requirements for each of the counterparties; and calculating a set of mutual put parameters for the trade based on the stored bilateral mutual put requirements. The system may further verify that the trade entered into between the parties meets the calculated set of mutual put parameters.

FIGURE 16.9

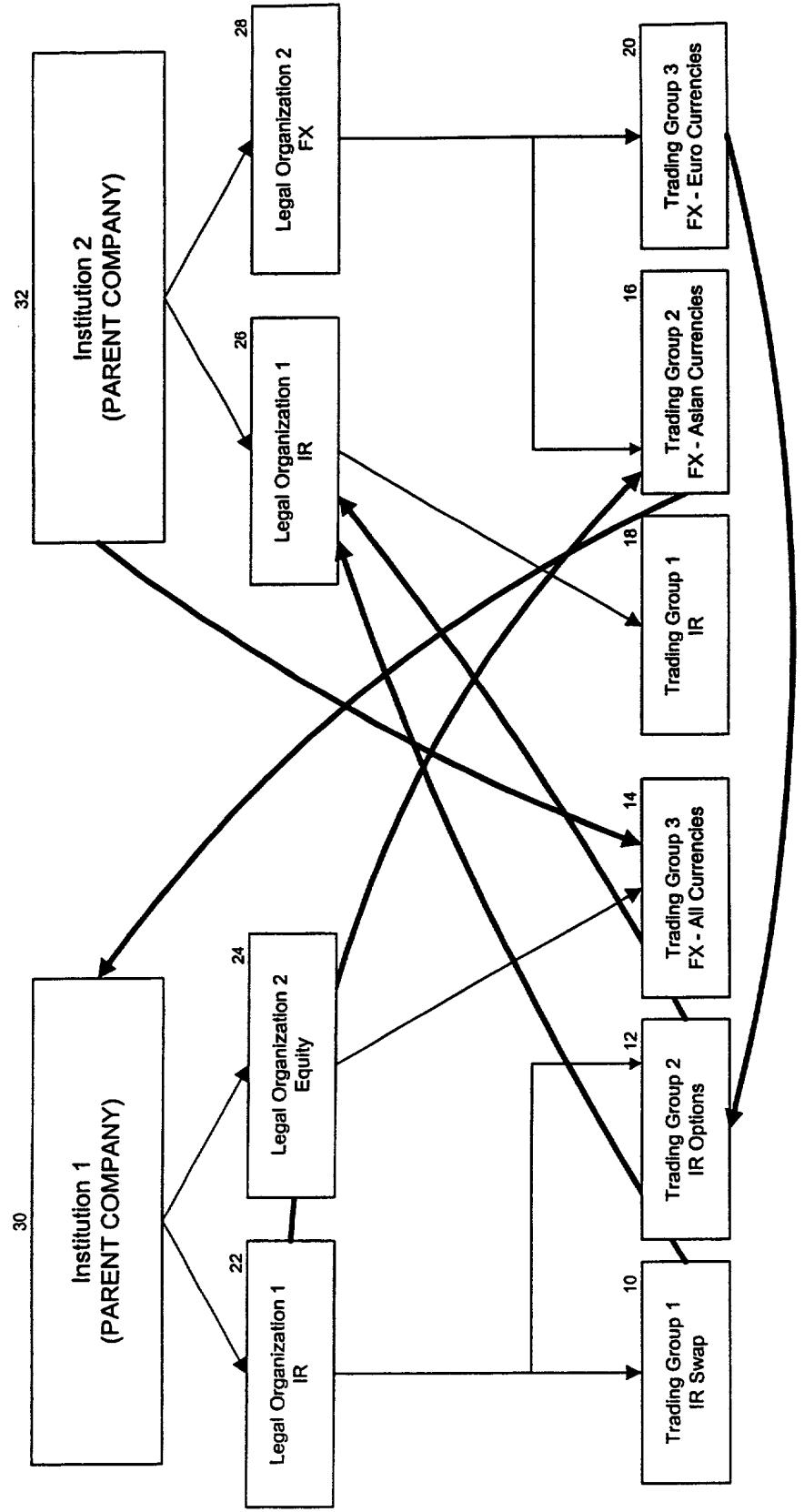


FIGURE 2

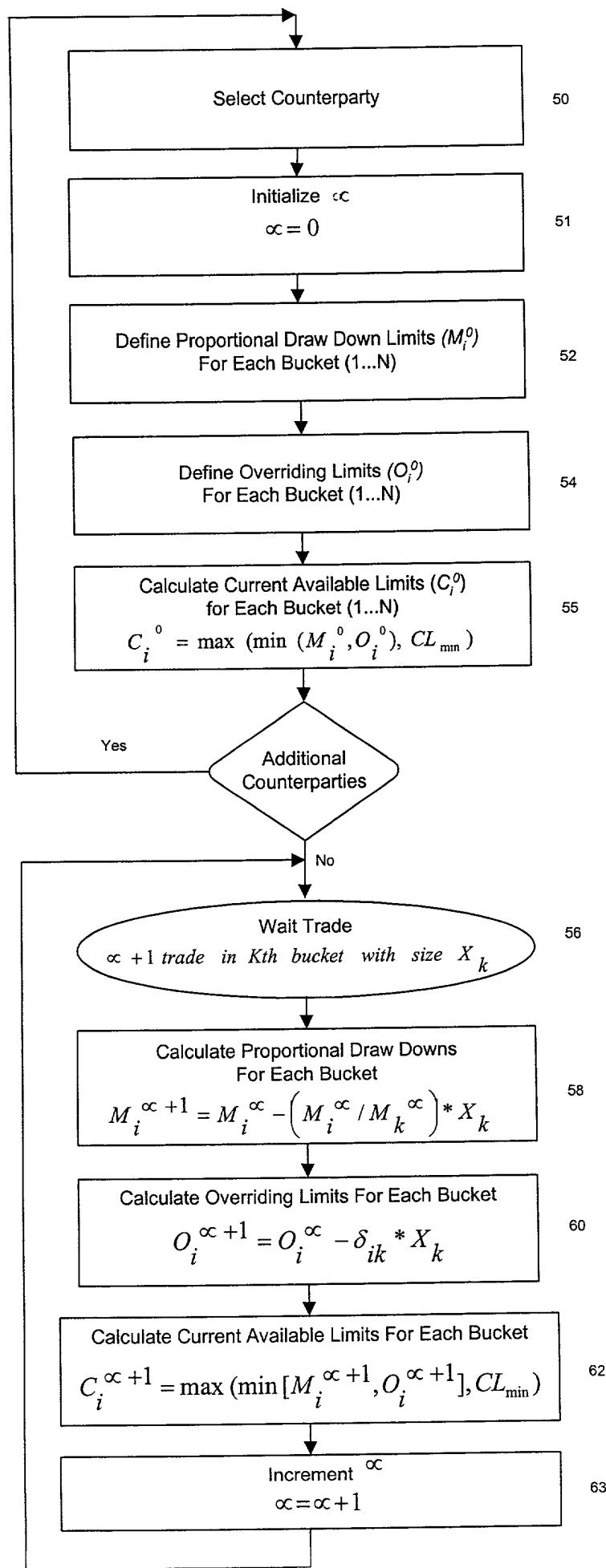
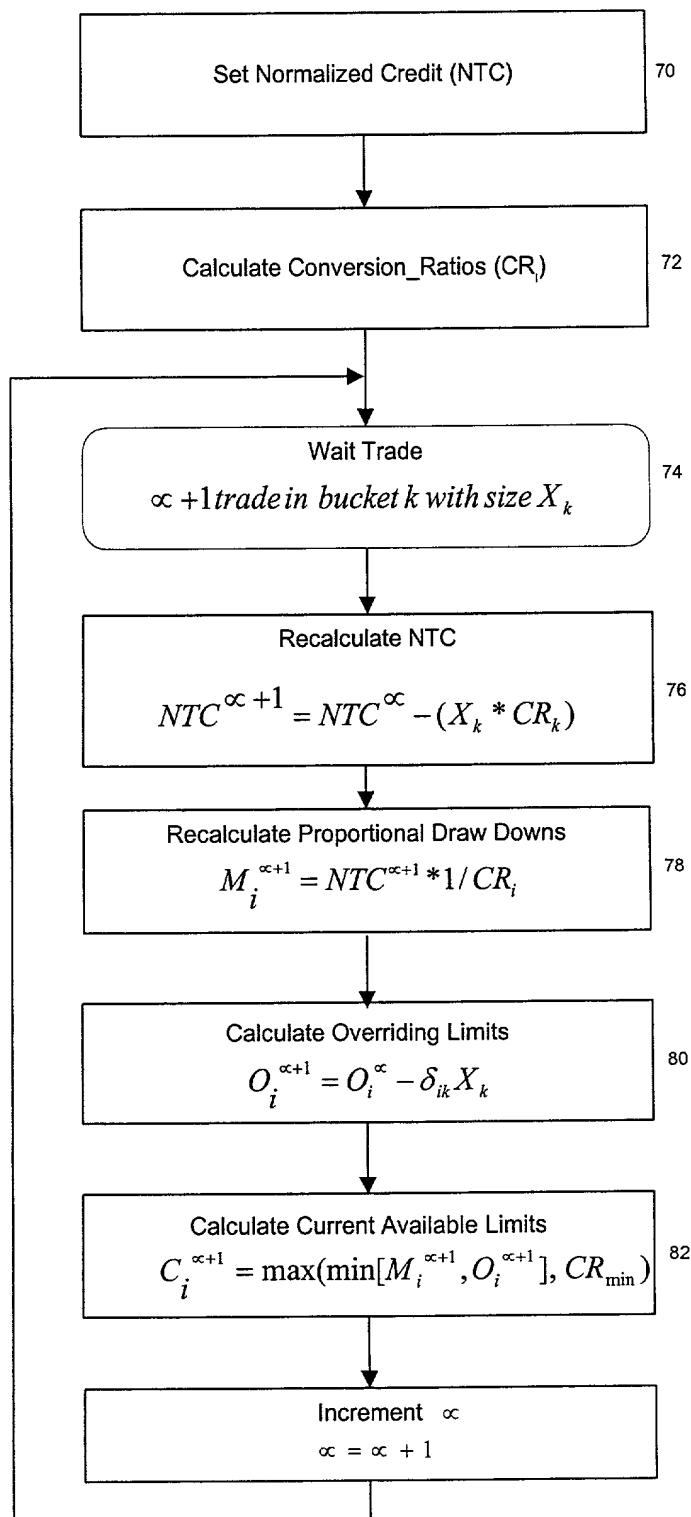


FIGURE 3



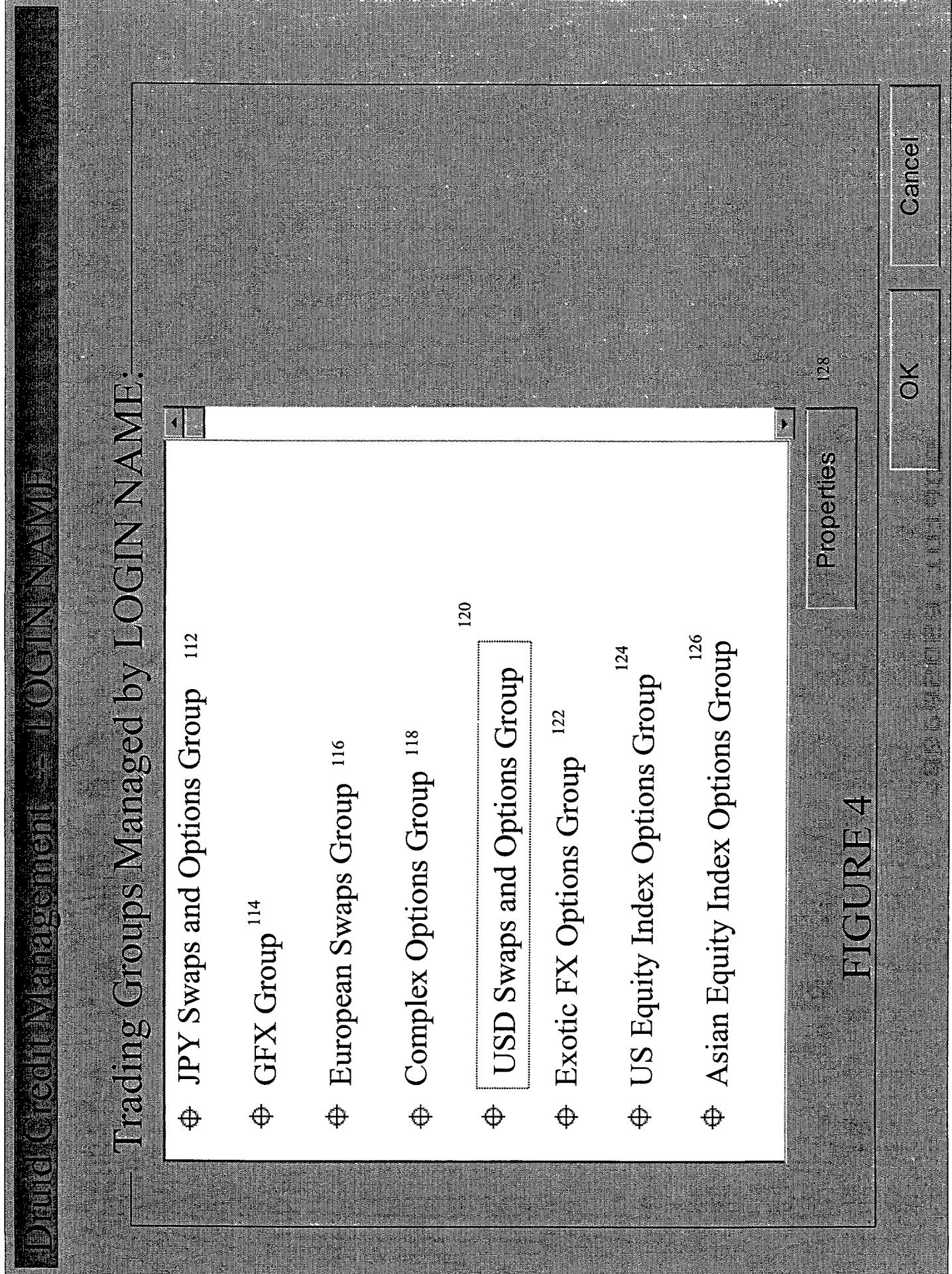


FIGURE 4

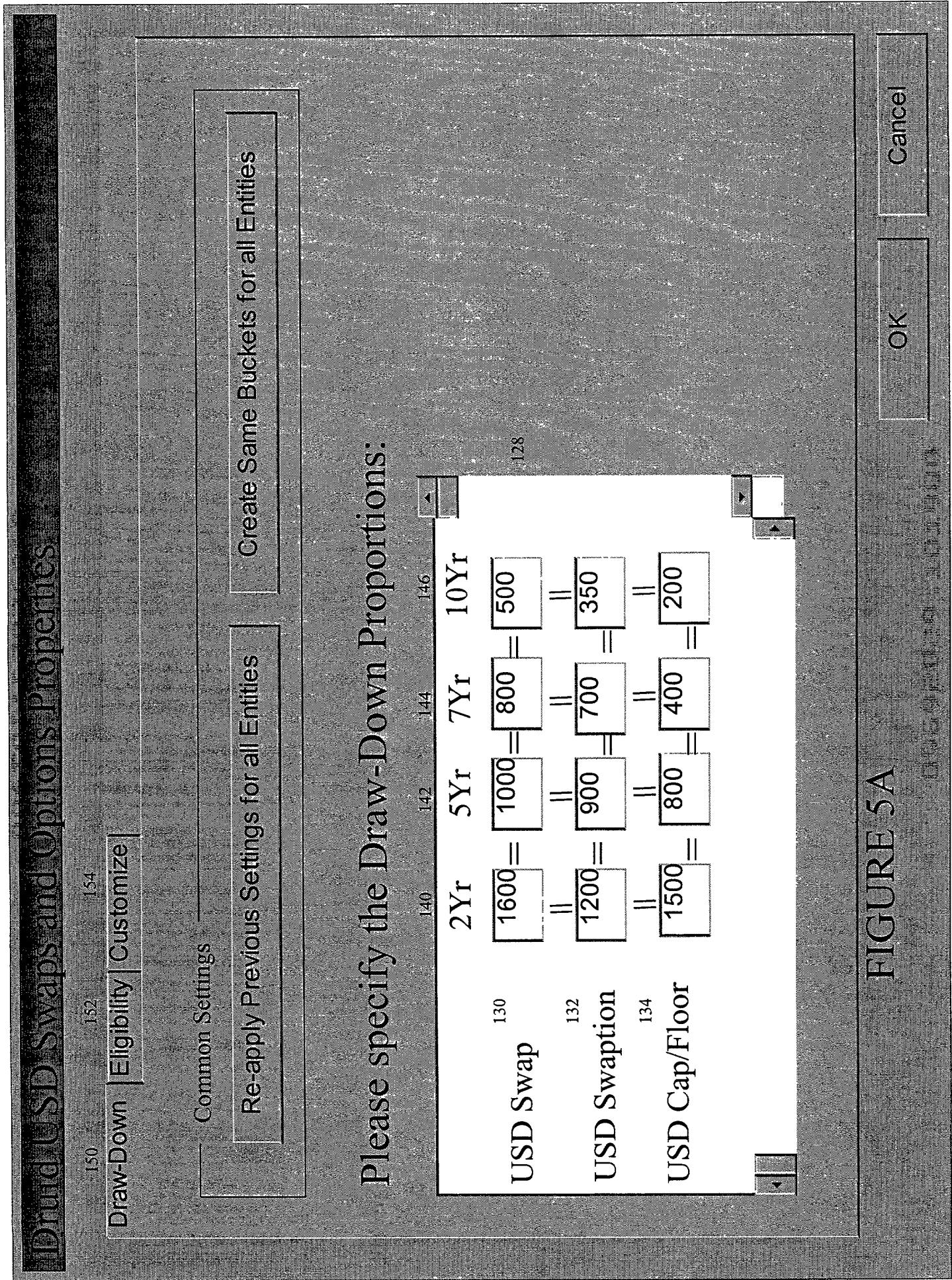


FIGURE 5A

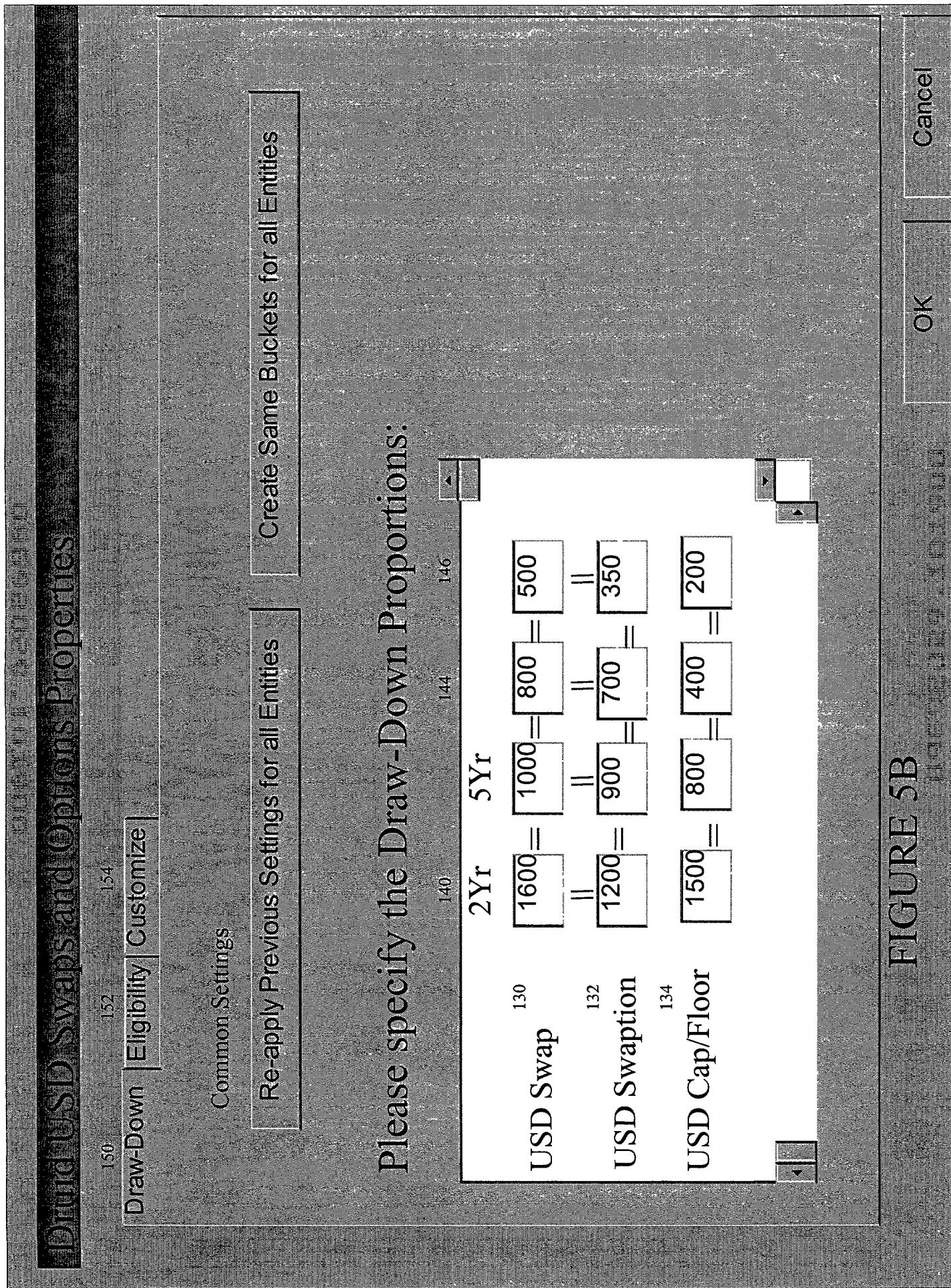


FIGURE 5B

Draw-Down Swings and Options Properties

Legal Entity	Eligibility	Available Credit (MM) (multiplies Draw-Down Proportions)
Merrill Lynch Capital Services	<input checked="" type="radio"/> Yes	<input type="radio"/> No 1.0
Morgan Stanley Trust	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.0
Morgan Stanley Capital Services	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Salomon Brothers Holding Co.	<input checked="" type="radio"/> Yes	<input type="radio"/> No 1.5
Goldman Sachs Capital Markets	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.3
Bank of America	<input checked="" type="radio"/> Yes	<input type="radio"/> No 1.5
Salomon Brothers Holding Co.	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.3
Lehman Brothers Special Financing	<input checked="" type="radio"/> Yes	<input type="radio"/> No 1.5
National Westminster Bank	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.3
BNP Paribas	<input checked="" type="radio"/> Yes	<input type="radio"/> No
ABN Amro NV	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.3
Deutsche Bank	<input checked="" type="radio"/> Yes	<input type="radio"/> No 1.5
Bank of New York	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.3
Merrill Lynch Capital Services	<input checked="" type="radio"/> Yes	<input type="radio"/> No 2.3

Draw-Down Eligibility | Customize

154

152

150

Eligibility
(multiplies Draw-Down Proportions)

164

162

160

158

156

FIGURE 6A

OK

Cancel

Drilldown USD Swaps and Options Properties

Legal Entity	Eligibility	Available Credit (MM) (Multiples Draw- Down Proportions)	Early Termination Period Start (Years)	Early Termination Period (Years)
150	152	154	156	158
160	162	164	166	168
170	172	174	176	178
180	182	184	186	188
190	192	194	196	198
200	202	204	206	208
210	212	214	216	218
220	222	224	226	228
230	232	234	236	238
240	242	244	246	248
250	252	254	256	258
260	262	264	266	268
270	272	274	276	278
280	282	284	286	288
290	292	294	296	298
300	302	304	306	308
310	312	314	316	318
320	322	324	326	328
330	332	334	336	338
340	342	344	346	348
350	352	354	356	358
360	362	364	366	368
370	372	374	376	378
380	382	384	386	388
390	392	394	396	398
400	402	404	406	408
410	412	414	416	418
420	422	424	426	428
430	432	434	436	438
440	442	444	446	448
450	452	454	456	458
460	462	464	466	468
470	472	474	476	478
480	482	484	486	488
490	492	494	496	498
500	502	504	506	508
510	512	514	516	518
520	522	524	526	528
530	532	534	536	538
540	542	544	546	548
550	552	554	556	558
560	562	564	566	568
570	572	574	576	578
580	582	584	586	588
590	592	594	596	598
600	602	604	606	608
610	612	614	616	618
620	622	624	626	628
630	632	634	636	638
640	642	644	646	648
650	652	654	656	658
660	662	664	666	668
670	672	674	676	678
680	682	684	686	688
690	692	694	696	698
700	702	704	706	708
710	712	714	716	718
720	722	724	726	728
730	732	734	736	738
740	742	744	746	748
750	752	754	756	758
760	762	764	766	768
770	772	774	776	778
780	782	784	786	788
790	792	794	796	798
800	802	804	806	808
810	812	814	816	818
820	822	824	826	828
830	832	834	836	838
840	842	844	846	848
850	852	854	856	858
860	862	864	866	868
870	872	874	876	878
880	882	884	886	888
890	892	894	896	898
900	902	904	906	908
910	912	914	916	918
920	922	924	926	928
930	932	934	936	938
940	942	944	946	948
950	952	954	956	958
960	962	964	966	968
970	972	974	976	978
980	982	984	986	988
990	992	994	996	998
1000	1002	1004	1006	1008
1010	1012	1014	1016	1018
1020	1022	1024	1026	1028
1030	1032	1034	1036	1038
1040	1042	1044	1046	1048
1050	1052	1054	1056	1058
1060	1062	1064	1066	1068
1070	1072	1074	1076	1078
1080	1082	1084	1086	1088
1090	1092	1094	1096	1098
1100	1102	1104	1106	1108
1110	1112	1114	1116	1118
1120	1122	1124	1126	1128
1130	1132	1134	1136	1138
1140	1142	1144	1146	1148
1150	1152	1154	1156	1158
1160	1162	1164	1166	1168
1170	1172	1174	1176	1178
1180	1182	1184	1186	1188
1190	1192	1194	1196	1198
1200	1202	1204	1206	1208
1210	1212	1214	1216	1218
1220	1222	1224	1226	1228
1230	1232	1234	1236	1238
1240	1242	1244	1246	1248
1250	1252	1254	1256	1258
1260	1262	1264	1266	1268
1270	1272	1274	1276	1278
1280	1282	1284	1286	1288
1290	1292	1294	1296	1298
1300	1302	1304	1306	1308
1310	1312	1314	1316	1318
1320	1322	1324	1326	1328
1330	1332	1334	1336	1338
1340	1342	1344	1346	1348
1350	1352	1354	1356	1358
1360	1362	1364	1366	1368
1370	1372	1374	1376	1378
1380	1382	1384	1386	1388
1390	1392	1394	1396	1398
1400	1402	1404	1406	1408
1410	1412	1414	1416	1418
1420	1422	1424	1426	1428
1430	1432	1434	1436	1438
1440	1442	1444	1446	1448
1450	1452	1454	1456	1458
1460	1462	1464	1466	1468
1470	1472	1474	1476	1478
1480	1482	1484	1486	1488
1490	1492	1494	1496	1498
1500	1502	1504	1506	1508
1510	1512	1514	1516	1518
1520	1522	1524	1526	1528
1530	1532	1534	1536	1538
1540	1542	1544	1546	1548
1550	1552	1554	1556	1558
1560	1562	1564	1566	1568
1570	1572	1574	1576	1578
1580	1582	1584	1586	1588
1590	1592	1594	1596	1598
1600	1602	1604	1606	1608
1610	1612	1614	1616	1618
1620	1622	1624	1626	1628
1630	1632	1634	1636	1638
1640	1642	1644	1646	1648
1650	1652	1654	1656	1658
1660	1662	1664	1666	1668
1670	1672	1674	1676	1678
1680	1682	1684	1686	1688
1690	1692	1694	1696	1698
1700	1702	1704	1706	1708
1710	1712	1714	1716	1718
1720	1722	1724	1726	1728
1730	1732	1734	1736	1738
1740	1742	1744	1746	1748
1750	1752	1754	1756	1758
1760	1762	1764	1766	1768
1770	1772	1774	1776	1778
1780	1782	1784	1786	1788
1790	1792	1794	1796	1798
1800	1802	1804	1806	1808
1810	1812	1814	1816	1818
1820	1822	1824	1826	1828
1830	1832	1834	1836	1838
1840	1842	1844	1846	1848
1850	1852	1854	1856	1858
1860	1862	1864	1866	1868
1870	1872	1874	1876	1878
1880	1882	1884	1886	1888
1890	1892	1894	1896	1898
1900	1902	1904	1906	1908
1910	1912	1914	1916	1918
1920	1922	1924	1926	1928
1930	1932	1934	1936	1938
1940	1942	1944	1946	1948
1950	1952	1954	1956	1958
1960	1962	1964	1966	1968
1970	1972	1974	1976	1978
1980	1982	1984	1986	1988
1990	1992	1994	1996	1998
2000	2002	2004	2006	2008
2010	2012	2014	2016	2018
2020	2022	2024	2026	2028
2030	2032	2034	2036	2038
2040	2042	2044	2046	2048
2050	2052	2054	2056	2058
2060	2062	2064	2066	2068
2070	2072	2074	2076	2078
2080	2082	2084	2086	2088
2090	2092	2094	2096	2098
2100	2102	2104	2106	2108
2110	2112	2114	2116	2118
2120	2122	2124	2126	2128
2130	2132	2134	2136	2138
2140	2142	2144	2146	2148
2150	2152	2154	2156	2158
2160	2162	2164	2166	2168
2170	2172	2174	2176	2178
2180	2182	2184	2186	2188
2190	2192	2194	2196	2198
2200	2202	2204	2206	2208
2210	2212	2214	2216	2218
2220	2222	2224	2226	2228
2230	2232	2234	2236	2238
2240	2242	2244	2246	2248
2250	2252	2254	2256	2258
2260	2262	2264	2266	2268
2270	2272	2274	2276	2278
2280	2282	2284	2286	2288
2290	2292	2294	2296	2298
2300	2302	2304	2306	2308
2310	2312	2314	2316	2318
2320	2322	2324	2326	2328
2330	2332	2334	2336	2338
2340	2342	2344	2346	2348
2350	2352	2354	2356	2358
2360	2362	2364	2366	2368
2370	2372	2374	2376	2378
2380	2382	2384	2386	2388
2390	2392	2394	2396	2398
2400	2402	2404	2406	2408
2410	2412	2414	2416	2418
2420	2422	2424	2426	2428
2430	2432	2434	2436	2438
2440	2442	2444	2446	2448
2450	2452	2454	2456	2458
2460	2462	2464	2466	2468
2470	2472	2474	2476	2478
248				

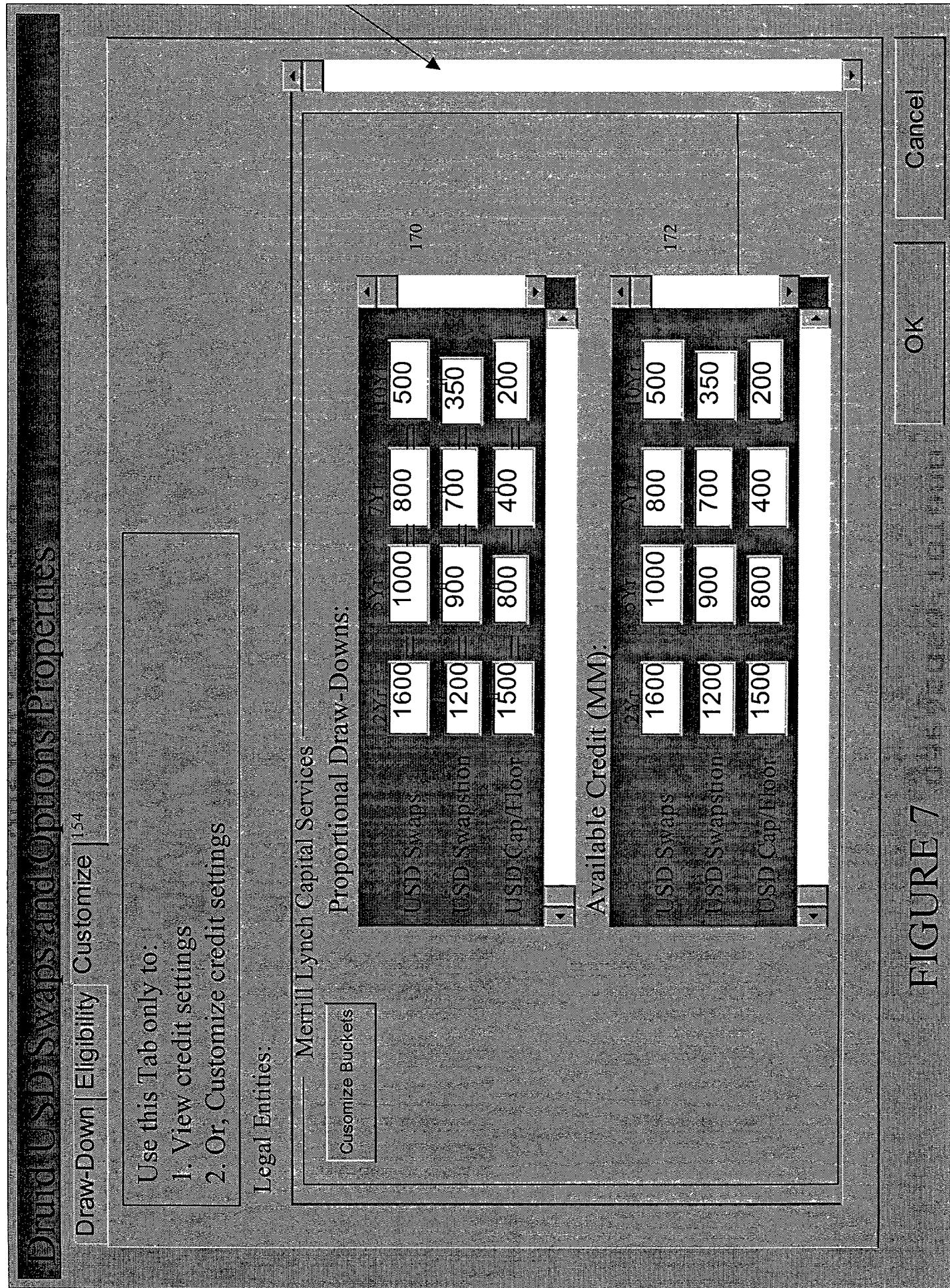


FIGURE 7

FIGURE 8

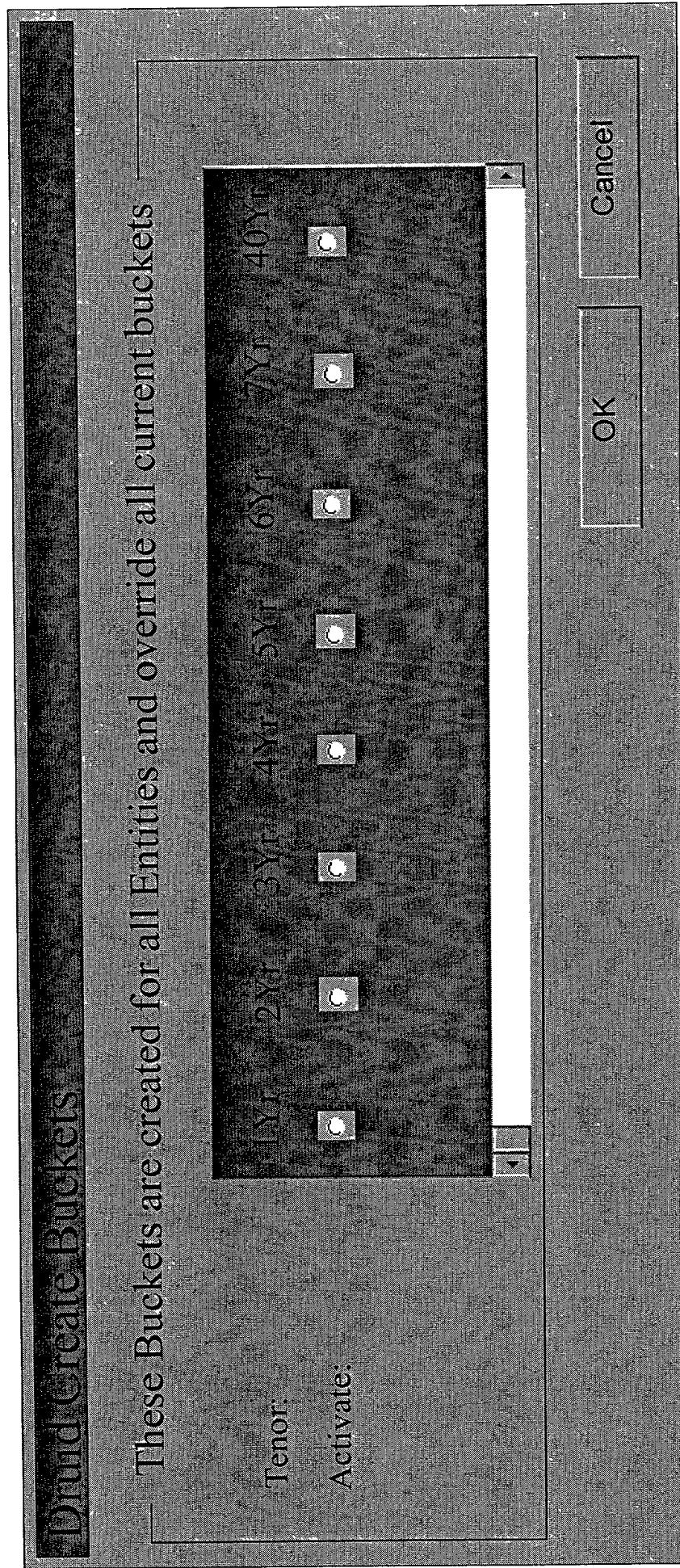
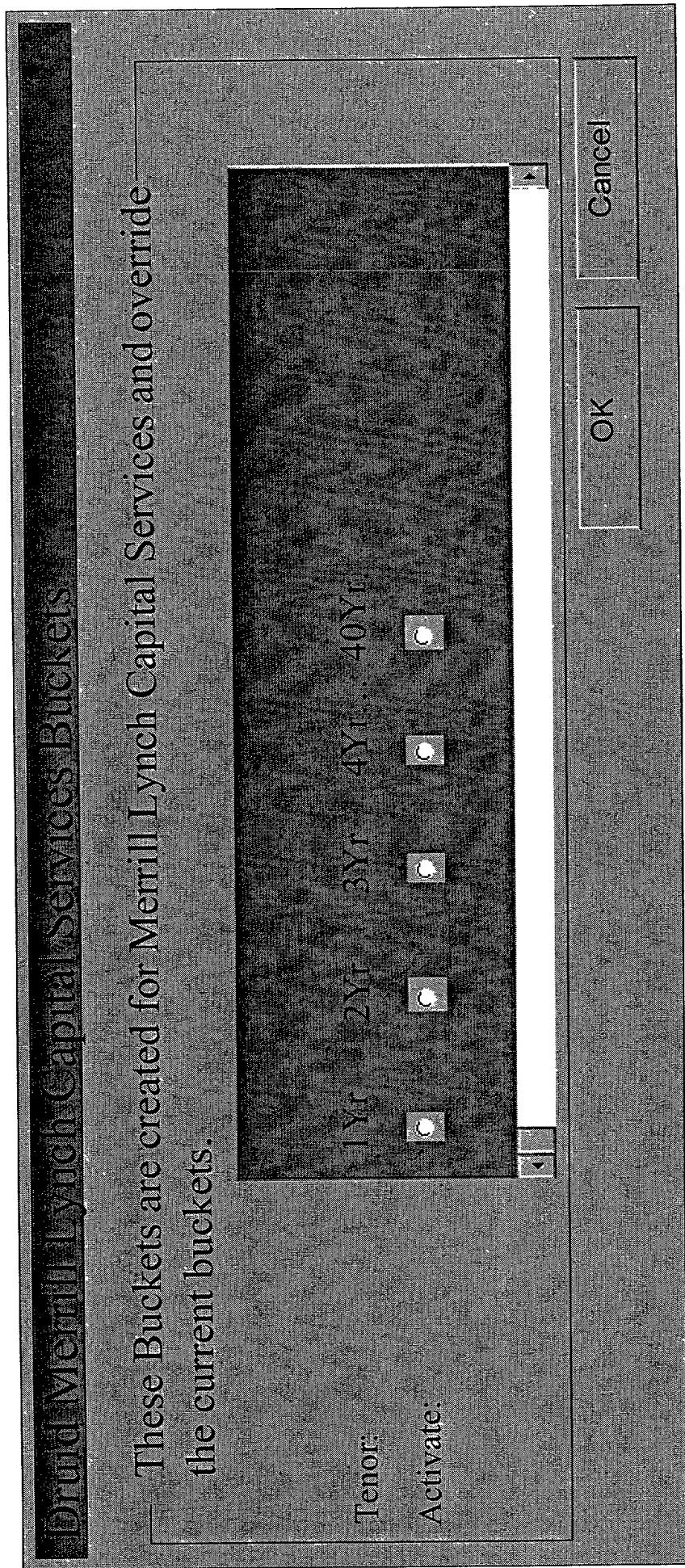


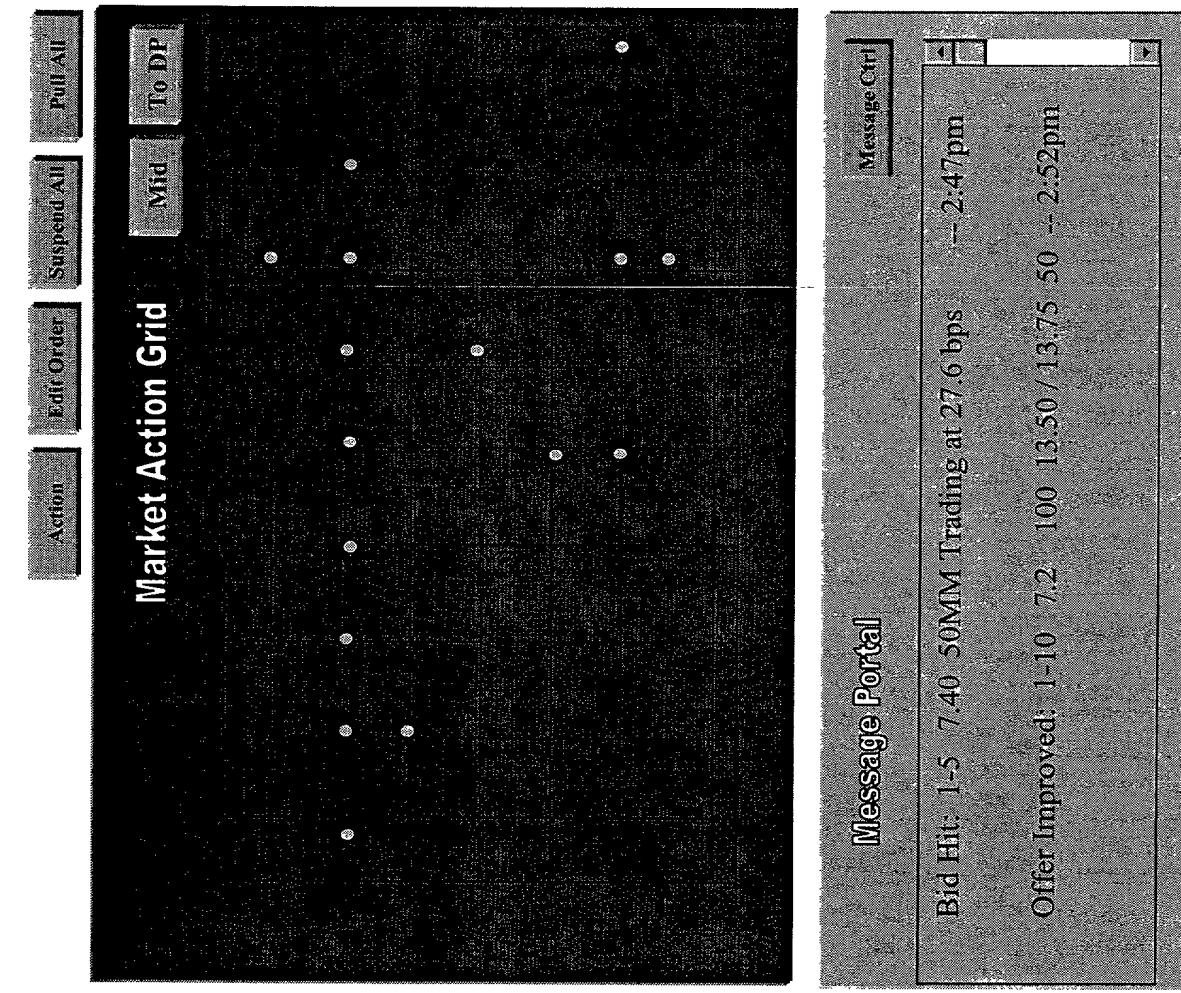
FIGURE 9



Traders own orders in reverse video

FIGURE 10

Market Action Table					
3m-10	7.25	100	12.75 / 13.50	50	ABC
1-1	7.35	50	14.00 / 14.35	100	
1-2	7.35	200	14.20 / 14.35	100	
1-4	7.35	100	15.00 / 15.25	100	
1-5	7.40	100	15.00 / 15.25	50	ABC
1-5	5.00R	200	17.00 / 18.00	300	
1-7	7.20	100	14.25 / 14.75	100	
1-10	7.20	100	13.50 / 13.75	50	
1-15	7.15	50	12.75 / 13.15	50	
2-2	7.40	ABC	100	14.50 /	
3-7	7.25	50	13.75 /		
4-5	7.35	100	14.20 / 14.35	100	
5-5	7.40		/ 13.75	100	
5-5	7.40BES	100	xx.xx / xx.xx	150	
5-10	7.50	100	12.25 / 12.50	100	
5-15	7.45		50	10.75 /	
7-10	7.45		50	11.75 /	



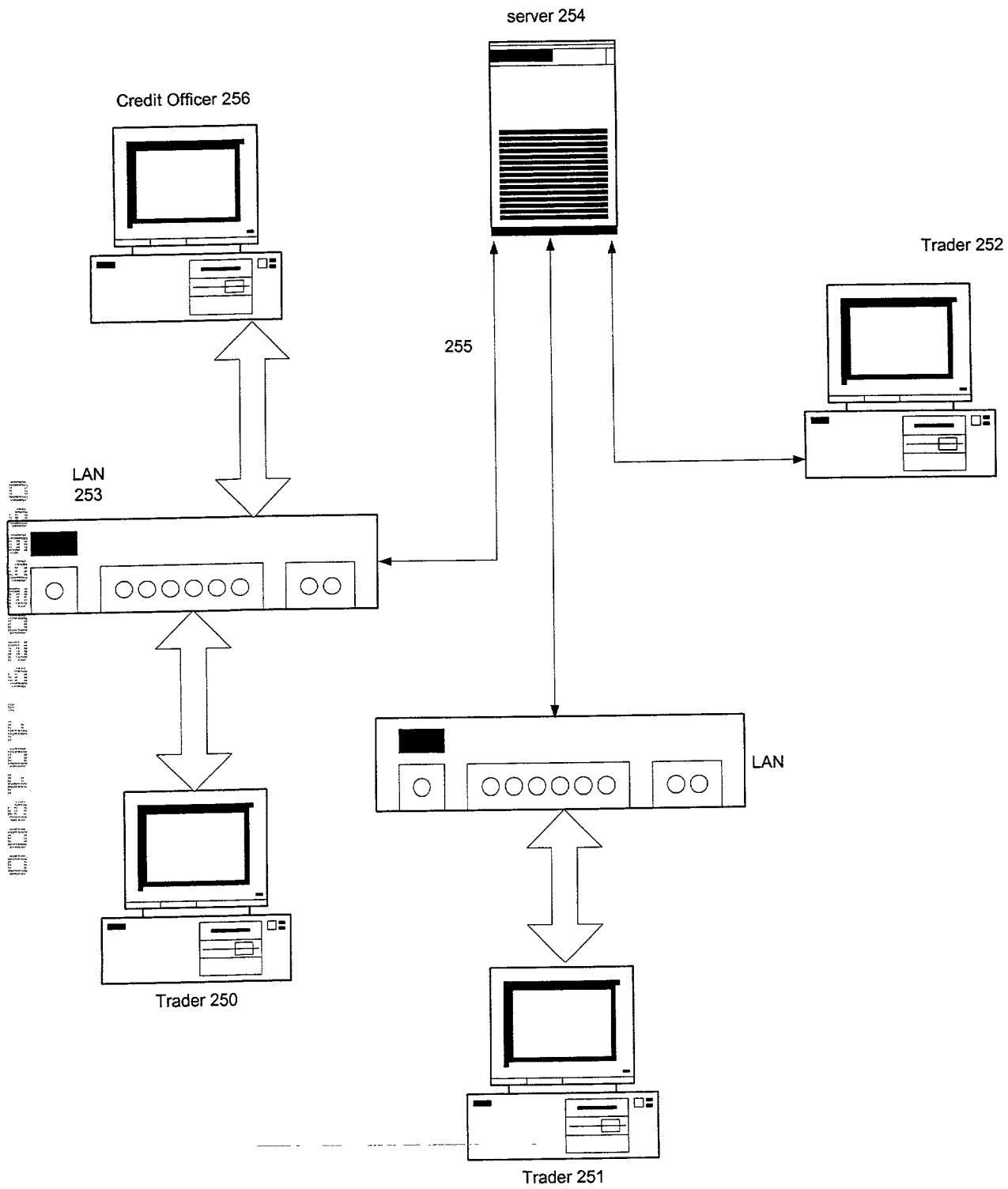
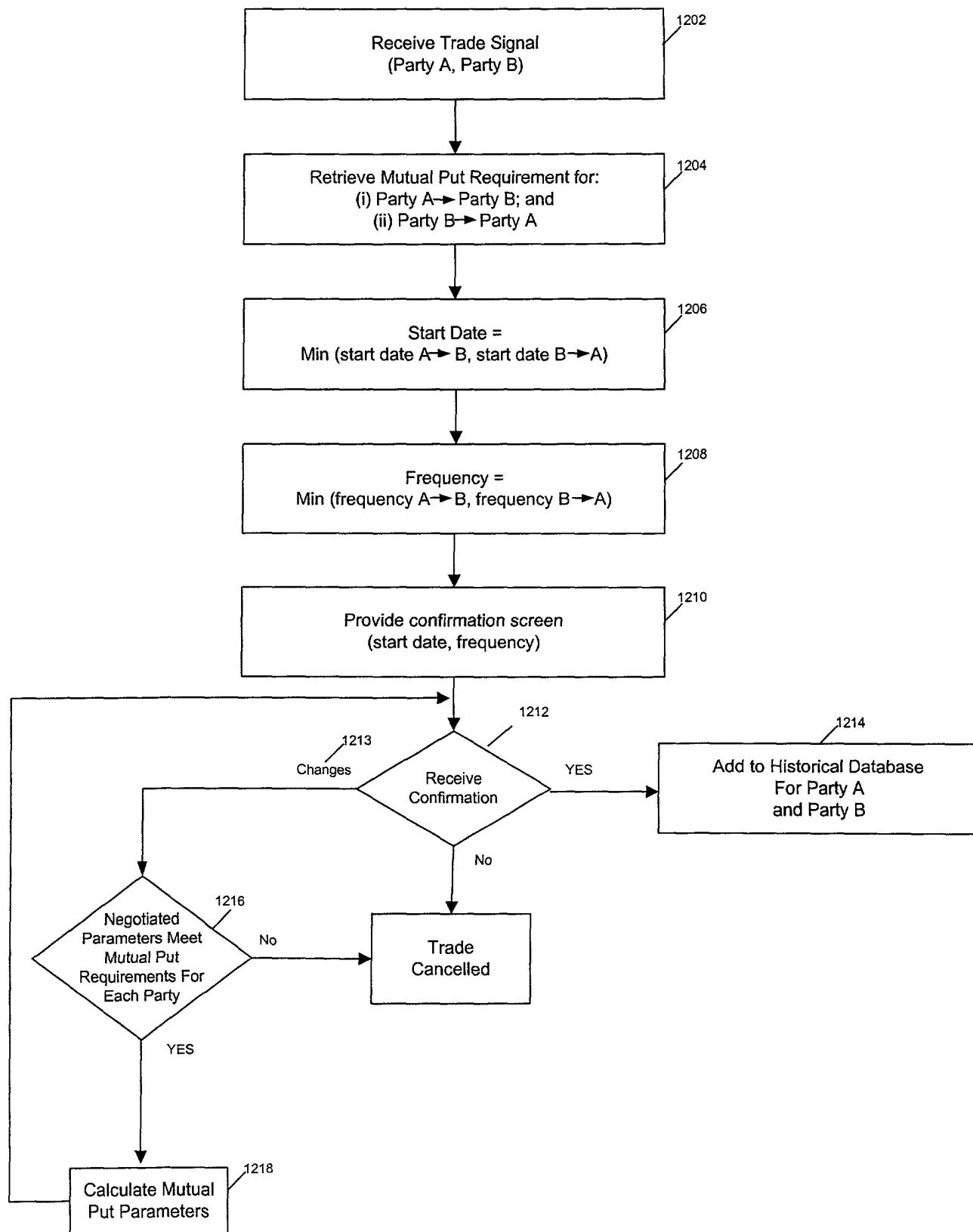


Figure 11

FIGURE 12



COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship is as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Method And System Of Managing Mutual Early Termination Terms For The Electronic Trading Of Financial Instruments

the specification of which (check only one item below)

is attached hereto.

was filed as United States Application
on _____

Serial Number _____
and was amended on _____

was filed as PCT international application
on _____
Number _____
and was amended on _____

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. 1.56 (a).

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(b) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate, or any PCT international application on this invention filed me or my legal representatives or assignees and having a filing date before that of the application on which priority is claimed.

Foreign Application Number(s)	Country	Filing Date	Priority Claimed - (Yes or No)

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date

POWER OF ATTORNEY

As a named Inventor, I hereby appoint the following attorneys, with full power of substitution and revocation, to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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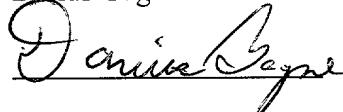
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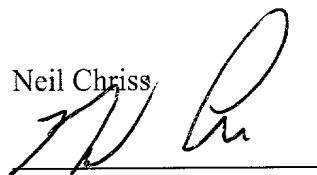
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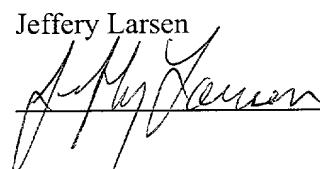
Date signed: 10/19/00

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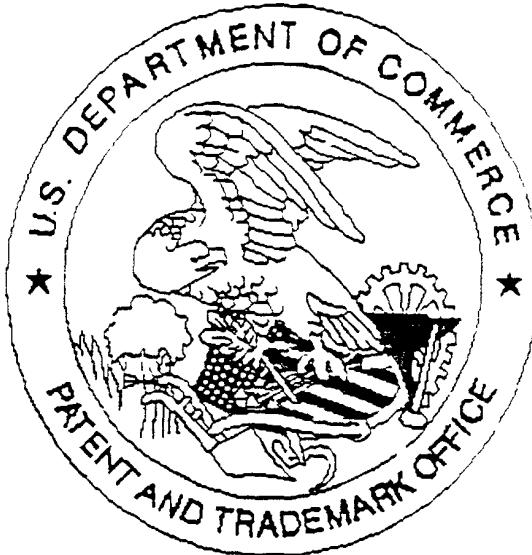


Date signed: 10/19/00

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